

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listing, of claims in the application:

Listing of Claims:

1. (Currently Amended) A device for processing data recorded on an optical recording medium, comprising:

a pickup unit to detect a signal reflected from the optical recording medium, the optical recording medium including data formed in a marked phase and an unmarked phase, a minimum length of the marked phase or unmarked phase being shorter than $3T$ and larger than $1T$, T being a channel bit clock; and

a signal processor to process the signal output from the pickup unit, thereby to output a binary signal which includes data corresponding to the minimum length.

2. (Currently Amended) A recording medium comprising:

a recording layer; and

data recorded in a marked phase and an unmarked phase on the recording layer, wherein a minimum length of the marked phase is shorter than $3T$ and larger than $1T$, T being a channel bit clock.

3. (Previously Presented) The recording medium of claim 2, wherein the minimum length of the marked phase is $2T$.

4. (Cancelled)

5. (Previously Presented) The device of claim 1, where the signal processor includes:

a signal detector to detect a high-frequency signal reproduced from the pickup unit, to convert the high-frequency signal into a binary signal by comparing the reproduced signal with a reference signal, and to output the binary signal;

a data converter to synchronize a reference clock with the binary signal from the signal detector and to restore the binary signal from the signal detector into a bit stream using the synchronized reference clock; and

a demodulator to restore the bit stream into original data.

6. (Previously Presented) The device of claim 5, wherein the signal detector includes:

a comparator to compare the reproduced signal with at least two reference signals and to output a plurality of binary signals; and

a selector to select one of the plurality of binary signals.

7. (Previously Presented) The device of claim 1, wherein the minimum length of the marked phase is $2T$.

8. (Currently Amended) A method for reproducing data recorded in an optical recording medium, comprising the steps of:

(a) converting a high-frequency signal reproduced from the optical recording medium into a binary signal by comparing the reproduced signal with a reference signal, the high-frequency signal including a signal corresponding to a minimum length of mark or space, the minimum length of the mark or space being shorter than $3T$ and larger than $1T$, T being a channel bit clock; and

(b) synchronizing a reference clock with the binary signal and restoring the binary signal into a bit stream using the synchronized reference clock.

9. (Previously Presented) The method of claim 8, wherein the minimum length of the mark or space is $2T$ or is shorter than the radius of a beam spot.

10. (Previously Presented) The method of claim 8, wherein the step (a) comprises the steps of:

(a1) comparing the reproduced signal with a plurality of reference signals and outputting a plurality of binary signals based on the comparison results; and

(a2) selecting one of the plurality of binary signals.

11. (Previously Presented) The method of claim 8, wherein the minimum length of the mark or space is $1.5T$.

12. (Previously Presented) The device of claim 1, wherein the minimum length of the marked phase is $1.5T$.

13. (Previously Presented) The device of claim 1, wherein the minimum length of the marked phase is shorter than a radius of a beam spot.

14. (Previously Presented) The recording medium of claim 2, wherein the minimum length of the marked phase is $1.5T$.

15. (Previously Presented) The recording medium of claim 2, wherein the minimum length of the marked phase is shorter than a radius of a beam spot.